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(54) **VERIFICATION OF SOFTWARE AGENTS AND AGENT ACTIVITIES**

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(57) **ABSTRACT**

The present invention provides for verification of software agents and their activities. In a distributed computing environment, an origin resource, a destination resource and a trusted resource are provided. The origin resource is associated with a software agent in that, most generally, the agent's information and/or an entrusted task are relevant to the origin resource. The destination resource is associated with the software agent in that, most generally, it is expected to advance the agent in the performance of an entrusted task. The trusted resource is associated with the software agent in that the trusted resource functions to provide verification of the software agent and its activities. The trusted resource preferably supports one or more selected operations such as, for example: receiving/forwarding of software agents; encrypting/decrypting software agents; acquiring, storing, retrieving and comparing of software agent fingerprints; executing TR rules that indicate the appropriateness of the interaction with the destination resource; establishing, setting, updating and checking return timers; generating and forwarding verification return relevant to verification of the agent and its activities; logging the activities of software agents with which the trusted resource interacts; and stripping, masking, or otherwise protecting part(s) or all of a software agent, particularly the TR rules.

20 Claims, 4 Drawing Sheets